

**City of Winnipeg
Water and Waste Department**

2015 RIVERS SURVEY MONITORING REPORT

| Survey Date ¹ : June 8, 2015 | | Assiniboine River Sampling Locations | | | | Red River Sampling Locations | | | | | | |
|---|------------|--------------------------------------|----------------------------|-----------------------------------|-------------------------|--|-----------------------------|------------------------|---------------------|---------------------|------------------------------|-----------------------|
| Parameter | Unit | HEADINGLY BRIDGE (R1) | WEST PERIMETER BRIDGE (R2) | ASSINIBOINE PARK FOOT BRIDGE (R3) | MAIN STREET BRIDGE (R4) | SOUTH FLOODWAY CONTROL ⁴ (R5) | SOUTH PERIMETER BRIDGE (R6) | FORT GARRY BRIDGE (R7) | NORWOOD BRIDGE (R8) | REDWOOD BRIDGE (R9) | NORTH PERIMETER BRIDGE (R10) | LOCKPORT BRIDGE (R11) |
| Temperature | ° C | 20.1 | 20.2 | 20.1 | 19.6 | 19.1 | 18.9 | 18.8 | 18.9 | 18.7 | 18.5 | 18.4 |
| Dissolved Oxygen | mg/L | 8.6 | 8.6 | 8.6 | 8.5 | 7.6 | 7.7 | 7.6 | 7.8 | 8.0 | 7.9 | 8.6 |
| Oxygen Saturation ² | % | 94 | 95 | 95 | 92 | 82 | 83 | 82 | 84 | 86 | 84 | 92 |
| Biochemical Oxygen Demand | mg/L | <3 | <3 | <3 | <3 | <3 | <3 | nr ⁵ | <3 | <3 | <3 | <3 |
| pH | units | 8.44 | 8.38 | 8.41 | 8.39 | 8.11 | 8.12 | 8.13 | 8.09 | 8.13 | 8.01 | 7.74 |
| Total Solids | mg/L | 1140 | 1060 | 1160 | 940 | 1220 | 958 | 1150 | 1190 | 1030 | 972 | 1100 |
| Total Suspended Solids | mg/L | 111 | 119 | 109 | 111 | 342 | 270 | 380 | 392 | 342 | 266 | 314 |
| Turbidity | n.t.u. | 58 | 62 | 63 | 55 | 225 | 157 | 215 | 238 | 197 | 130 | 182 |
| Total Organic Carbon | mg/L | 20 | 18 | 22 | 23 | 25 | 21 | 27 | 27 | 24 | 21 | 18 |
| Chlorophyll a | ug/L | 12 | 16 | 16 | 16 | 4 | 6 | 2 | 4 | 7 | 4 | 9 |
| Ammonia Nitrogen | mg/L N | <0.003 | <0.003 | <0.003 | <0.003 | 0.005 | 0.021 | 0.016 | 0.041 | 0.031 | 0.047 | 0.069 |
| Nitrate Nitrogen | mg/L N | 0.184 | 0.190 | 0.186 | 0.197 | 1.150 | 1.100 | 1.070 | 0.868 | 0.644 | 0.622 | 0.602 |
| Total Kjeldahl Nitrogen | mg/L N | 0.8 | 0.7 | 7.3 | 0.6 | 0.9 | 0.7 | 1.0 | 0.9 | 1.0 | 0.7 | 1.0 |
| Total Nitrogen ² | mg/L N | 1.0 | 0.9 | 7.5 | 0.8 | 2.1 | 1.8 | 2.1 | 1.8 | 1.6 | 1.3 | 1.6 |
| Soluble Phosphorus | mg/L P | 0.08 | 0.08 | 0.09 | 0.09 | 0.12 | 0.11 | 0.11 | 0.12 | 0.11 | 0.13 | 0.21 |
| Total Phosphorus | mg/L P | 0.60 | 0.40 | 2.00 | 0.40 | 0.60 | 0.60 | 0.80 | 0.90 | 1.10 | 0.60 | 1.10 |
| Escherichia Coliform ³ | MPN/100 mL | 4 | 23 | 15 | 93 | 430 | 430 | 210 | 230 | 150 | 93 | 430 |
| Fecal Coliform ³ | MPN/100 mL | 9 | 23 | 43 | 93 | 430 | 430 | 210 | 230 | 150 | 93 | 430 |

Weather Conditions during monitoring Winds N at 3 km/hr with 100% cloud cover and <0.1 mm of precipitation. Average air temperature during survey at 22.1°C

- Notes:
- 1) LIMS Reference No: **42822**
 - 2) Calculated values
 - 3) Analysed by contract laboratory
 - 4) Red River Floodway at South Floodway Control Gates **738.9** ft.
 - 5) No result because the initial DO was below the BOD test limit.

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